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- Published:
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF MANUFACTURING FOAMED COMPOSITE

(57) Abstract: A method of manufacturing a glass fibre reinforced structural composite article, said method comprising the steps of spraying a mechanically blended polyester foam into a mould whilst simultaneously introducing chopped glass fibre. The mechanically blended polyester foam is foamed utilising a gas, and said polyester foam includes a polyester resin that has a viscosity in the range of 12000 - 15000 cP (Brookfield LVT sp. 4/12 rpm). An article manufactured by this method can be made without the necessity of rolling to remove air bubbles, and has a density in the range of 0.6 to 0.8 g/cm³.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU03/00370

A. CLASSIFICATION OF SUBJECT MATTER												
Int. Cl. ⁷ : C08J 5/08, 9/35; B29C 41/08												
According to International Patent Classification (IPC) or to both national classification and IPC												
B. FIELDS SEARCHED												
Minimum documentation searched (classification system followed by classification symbols) C08J 5/08, 9/35; B29C 41/08												
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched												
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WPAT; JAPIO; IPC marks and Keywords												
C. DOCUMENTS CONSIDERED TO BE RELEVANT												
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.										
X	WO 85/01238 A (AB ROVAC) 28 March 1985 Pages 2-3, 5, 7-8.	1 & 4-7										
Y	GB 2102809 A (SNIAL RESINE POLIESTERE) 9 February 1983 Pages 2-3	1, 2, 4-8 & 10										
Y	GB 2114466 A (TWYFORDS LTD) 24 August 1983 Page 1 (lines 27-32, lines 37-40, lines 59-65) and page 2 (lines 47-65)	1, 2, 4-8 & 10										
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex												
<p>* Special categories of cited documents:</p> <table border="0"> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"E" earlier application or patent but published on or after the international filing date</td> <td>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td>"&" document member of the same patent family</td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	"P" document published prior to the international filing date but later than the priority date claimed	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention											
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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family											
"P" document published prior to the international filing date but later than the priority date claimed												
Date of the actual completion of the international search 17 April 2003		Date of mailing of the international search report 30 APR 2003										
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929		Authorized officer JAMES DZIEDZIC Telephone No : (02) 6283										

INTERNATIONAL SEARCH REPORT

International application No.
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3615969 A (HEGG) 26 October 1971	
A	FR 2497719 A (DUROSTYL) 16 July 1982	

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU03/00370

Box I Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos :
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos :
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos :
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box II Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Claim 1 is directed to a method of manufacturing a glass fibre reinforced structural composite article comprising a polyester resin, characterised by having a viscosity of 12000-15000cP.

Claim 6 is directed to an article manufactured from a glass fibre reinforced structural composite characterised by said composite having a density of between 0.6 to 0.8 g/cm³.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU03/00370

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Patent Family Member			
WO	8501238	CA	1220312	EP	155949	SE	8304872
		US	4743417				
GB	2102809	BE	893897	CH	652159	DE	3227485
		FR	2510031	IT	1142027	JP	58065651
GB	2114466	NONE					
US	3615969	DE	1925384	FR	2008894	GB	1221267
		NL	6907634				
FR	2497719	NONE					
END OF ANNEX							